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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCrory, Chief

MONTHLY NEWS LETTER

WASHINGTON, D. C., JUNE 20, 1927.

IMPORTANT! NEW BOOKS OF TRANSPORTATION REQUESTS WILL NOT BE ISSUED ON JULY 1. REQUESTS NOW ON HAND MAY BE USED ON AND AFTER THAT DATE. EACH TRANSPORTATION REQUEST YOU HAVE IS STAMPED

BUREAU OF PUBLIC ROADS,
AGRICULTURAL ENGINEERING, 1927.

ON EACH REQUEST USED ON JULY 1 OR THEREAFTER, THE STAMPED '1927' SHOULD BE CROSSED OUT AND "1928" INSERTED. ATTENTION AGAIN IS CALLED TO THE IMPORTANCE OF SHOWING THE SYMBOL NUMBER ON ORIGINAL AND DUPLICATE TRANSPORTATION REQUESTS.

THE OUTSTANDING EVENT THIS MONTH IN WASHINGTON IS THE CONFERENCE OF THE FIRST INTERNATIONAL CONGRESS OF SOIL SCIENCE, HELD JUNE 13-22. THIS ORGANIZATION, WHICH INCLUDES IN ITS MEMBERSHIP THE OUTSTANDING SOIL SCIENTISTS OF THE WORLD, HAD ITS INCEPTION AT A GATHERING AT BUDAPEST, HUNGARY, IN 1909; A SECOND MEETING FOLLOWED AT STOCKHOLM, SWEDEN, IN 1910. INTERNATIONAL CONDITIONS, HOWEVER, PREVENTED A THIRD GATHERING UNTIL 1922, WHEN THE MEETING WAS HELD AT PRAGUE, CZECHOSLOVAKIA. IN 1924, THE FOURTH CONFERENCE WAS HELD AT ROME. AT THIS MEETING THE SCOPE OF THE ORGANIZATION WAS ENLARGED AND IT WAS DECIDED TO HOLD A WORLD-WIDE CONFERENCE AT WASHINGTON IN 1927, TO BE KNOWN AS THE FIRST INTERNATIONAL CONGRESS OF SOIL SCIENCE.

THE CONGRESS IS DIVIDED INTO SIX COMMISSIONS DEALING WITH DIFFERENT PHASES OF SOIL SCIENCE, AS FOLLOWS:

- | | |
|------------------|---|
| FIRST COMMISSION | - SOIL MECHANICS AND PHYSICS |
| SECOND " | - SOIL CHEMISTRY |
| THIRD " | - SOIL BIOLOGY AND BIOCHEMISTRY |
| FOURTH " | - SOIL FERTILITY |
| FIFTH " | - CLASSIFICATION, NOMENCLATURE AND MAPPING OF SOILS |
| SIXTH " | - THE APPLICATION OF SOIL SCIENCE TO LAND CULTIVATION |

THE ACTIVITIES OF THE SIXTH COMMISSION ARE THE ONES IN WHICH THIS DIVISION IS PARTICULARLY INTERESTED, EMBRACING AS IT DOES THE SUBJECTS OF IRRIGATION AND DRAINAGE. PAPERS WERE PREPARED BY THE FOLLOWING MEMBERS OF OUR STAFF:

W. W. McLAUGHLIN, "A FEW PHYSICAL SOIL PROBLEMS IN WESTERN RECLAMATION."

FRANK ADAMS, "IRRIGATION INSTITUTIONS IN THE UNITED STATES".

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McLaughlin, Chief

MONTHLY NEWS LETTER

Washington, D. C., June 30, 1937.

IMPORTANT: NEW BOOKS OF TRANSPORTATION REQUESTS WILL NOT BE
ISSUED OF JULY 1. REQUESTS NOW ON HAND MAY BE USED ON AND AFTER THAT
DATE. EACH TRANSPORTATION REQUEST YOU HAVE IS NUMBERED.

Bureau of Public Roads,
Agricultural Engineering, 1937.

ON EACH REQUEST USED ON JULY 1 OR THEREAFTER, THE NUMBERED "1937" SHOULD
BE CROSSED OUT AND "1938" INSERTED. ATTENTION MUST BE CALLED TO THE
IMPORTANCE OF SHOWING THE EXACT NUMBER ON ORIGINAL AND DUPLICATE TRANS-
PORTATION REQUESTS.

THE OUTSTANDING EVENT THIS MONTH IN WASHINGTON IS THE CONGRESS
ON THE FIRST INTERNATIONAL CONGRESS OF SOIL SCIENCE, HELD JUNE 13-25.
THIS ORGANIZATION, WHICH INCLUDES IN ITS MEMBERSHIP THE OUTSTANDING SOIL
SCIENTISTS OF THE WORLD, HAS ITS HEADQUARTERS AT A LATHAM AT BUDAPEST,
HUNGARY. IN 1909 A SECOND MEETING FOLLOWED AT STOCKHOLM, SWEDEN. IN 1910
INTERNATIONAL CONDITIONS, HOWEVER, PREVENTED A THIRD MEETING UNTIL 1925,
WHEN THE MEETING WAS HELD AT PRAGUE, CZECHOSLOVAKIA. IN 1928, THE FOURTH
CONGRESS WAS HELD AT ROME. AT THIS MEETING THE SCOPE OF THE ORGANIZATION
WAS ENLARGED AND IT WAS DECIDED TO HOLD A WORLDWIDE CONGRESS AT
WASHINGTON IN 1937, TO BE KNOWN AS THE FIRST INTERNATIONAL CONGRESS OF
SOIL SCIENCE.

THE CONGRESS IS DIVIDED INTO SIX COMMISSIONS DEALING WITH DIFFERENT
PHASES OF SOIL SCIENCE, AS FOLLOWS:

First Commission - Soil Mechanism and Physics	
Second " - Soil Chemistry	
Third " - Soil Biology and Biochemistry	
Fourth " - Soil Fertility	
Fifth " - Classification, Nomenclature and Mapping of Soils	
Sixth " - The Application of Soil Science to Land Cultivation	

THE ACTIVITIES OF THE SIXTH COMMISSION ARE THE ONLY ONE IN WHICH THIS
DIVISION IS PARTICULARLY INTERESTED, SINCE AS IT DOES THE SUBJECTS
OF IRRIGATION AND DRAINAGE. PAPERS WERE PREPARED BY THE FOLLOWING MEMBERS
OF OUR STAFF:

W. W. McLaughlin, "A New Physical Soil Problem in
Western Reclamation."
Frank Adams, "Irrigation Institutions in the
United States."

F. O. BARTEL, "EFFECT OF DRAINS UPON THE GROUND WATER
IN COASTAL PLAIN SOILS OF NORTH CAROLINA."
GEORGE R. BOYD, "USE OF EXPLOSIVES IN CLEARING LAND."

MR. McLAUGHLIN AND MR. BARTEL WERE PRESENT AT THE MEETING, AS WELL AS MEMBERS OF THE STAFF LOCATED AT WASHINGTON. MR. McCORRY ACTED AS CHAIRMAN OF MOST OF THE SESSIONS OF THE SIXTH COMMISSION.

IN CONNECTION WITH THE MEETING THIS DIVISION HAD AN EXHIBIT CONSISTING OF A NUMBER OF ENLARGED PHOTOGRAPHS IN COLORS SHOWING EROSION IN VARIOUS STAGES AND FORMS, AND A 3 X 5 FOOT MODEL OF A TERRACED FIELD.

W. W. McLAUGHLIN ARRIVED IN WASHINGTON JUNE 6, FOR THE PURPOSE OF GOING OVER WITH MR. McCORRY THE WORK OF THE IRRIGATION SECTION. MR. McLAUGHLIN ON HIS WAY WEST WILL STOP AT ST. PAUL TO BE PRESENT AT THE A.S.A.E. CONVENTION.

AT THE ANNUAL MEETING OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS AT ST. PAUL, JUNE 22-25, C.E. RAMSER AND J.C. MARR WILL READ PAPERS. M.C. BETTS WILL RENDER A REPORT ON THE FARM BUILDING RESEARCH SITUATION.

EXPERIMENTS ARE BEING CONTINUED BY CARL ROHWER AT THE HYDRAULIC LABORATORY AT FORT COLLINS, COLO., TO DETERMINE A GENERAL EVAPORATION FORMULA AND ALSO TO FIND THE RELATION BETWEEN THE EVAPORATION FROM SMALL TANKS AND LARGE RESERVOIRS.

EXPERIMENTS ON THE EVAPORATION FROM A COLORADO TYPE TANK UNDER CONTROLLED CONDITIONS AND CHECKED UNDER FIELD CONDITIONS, RESULTED IN THE FORMULA $E = (0.118W + 0.44 (E_s - E_d))$, WHERE E IS THE EVAPORATION IN INCHES PER 24 HOURS, W THE GROUND WIND IN MILES PER HOUR, AND $(E_s - E_d)$ THE DIFFERENCE IN VAPOR PRESSURE IN INCHES OF MERCURY. THIS FORMULA GIVES RESULTS WHICH AGREE QUITE CLOSELY WITH THE OBSERVED EVAPORATION FROM THIS TYPE OF TANK. EXPERIMENTS ON OTHER SIMILAR TYPES FOR A SHORT PERIOD GAVE RESULTS WHICH AGREE EQUALLY WELL WITH THE OBSERVED EVAPORATION FROM THESE TANKS. THE NUMERICAL RESULTS ARE SHOWN IN THE ACCOMPANYING TABLE.

RESULTS OF EVAPORATION OBSERVATIONS FROM SEPTEMBER 21 TO
NOVEMBER 15, 1926, EXCLUSIVE OF DAYS OF HEAVY SNOWFALL AND HIGH WINDS.

<u>TYPE OF TANK</u>	<u>WINDS</u> <u>DIMENSIONS</u>	<u>AV. EVAPORATION IN</u>		<u>RATIO OF Ob-</u> <u>SERVED TANK</u> <u>EVAPORATION</u> <u>TO RESERVOIR</u>
		<u>INCHES PER 24 HOURS</u>		
		<u>OBSERVED</u>	<u>COMPUTED</u>	
LARGE RESERVOIR	84.8' DIAM., 6.75' DEEP	0.102	0.128	---
U.S.G.S. FLOATING PAN	3' SQUARE, 1.5' DEEP	0.130	0.129	1.275
COLO. TYPE BURIED PAN	3' SQUARE 1.25' DEEP	0.118	0.120	1.157
U.S. WEATHER BUREAU CLASS A LAND PAN	4' DIAM. 10"	0.134	0.136	1.314

F. G. BARTLE, "Effect of Change in Grain and Grain Water
in Certain Grain Crops of North Carolina."
George H. BOWEN, "The Evaporation in Certain Grains."

Mr. BARTLE and Mr. BOWEN were present at the meeting, as well
as members of the staff located at Washington. Mr. BOWEN acted as
Chairman of most of the sessions of the Sixth Commission.
In connection with the meeting this division had an exhibit con-
sisting of a number of enlarged photographs in colors showing erosion in
various states and forms, and a 3 x 5 foot model of a terraced field.

Mr. BARTLE arrived in Washington June 5, for the purpose of
going over with Mr. BOWEN the work of the irrigation section. Mr.
BARTLE on his way will stop at St. Paul to be present at the
A.S.A.E. Convention.

At the annual meeting of the American Society of Agricultural
Engineers at St. Paul, June 22-25, F. G. BARTLE and J. G. WALKER will read
papers. Mr. BARTLE will present a report on the farm building research
station.

Experiments are being continued by Carl BOWEN at the hydraulic
laboratory at Fort Collins, Colo., to determine a general evaporation
formula and also to find the relation between the evaporation from small
tanks and large reservoirs.

Experiments on the evaporation from a circular type tank under con-
trolled conditions and checked under field conditions resulted in the
formula $E = (0.187 + 0.44 E_s) (E_s - E_a)$, where E is the evaporation in inches
per 24 hours, E_s the ground water in inches per hour, and E_a the
difference in vapor pressure in inches of mercury. This formula gives re-
sults which agree quite closely with the observed evaporation from this
type of tank. Experiments on other similar types for a short period
have results which agree equally well with the observed evaporation from
these tanks. The numerical results are shown in the accompanying table.

TABLE OF EVAPORATION OBSERVATIONS FROM BARTLE'S TANK
November 15, 1922. EXAMINEE OF RATE OF WATER THROUGH AND HIGH WINDS.

Type of Tank	Dimensions	Evaporation in inches per 24 hours	Ratio of Ob- served to Reservoir Evaporation
Large Reservoir	64 ft. diam. 8 ft. deep	0.102	0.128
U.S.G.S. Floating Pan	37 square 1.5' deep	0.130	0.155
Calo. Type Banded Pan	37 square 1.5' deep	0.118	0.157
U.S. Weather Bureau Class A Land Pan	4' diam. 10"	0.124	0.158

IN ORDER TO DETERMINE THE RELATION BETWEEN THE EVAPORATION FROM SMALL TANKS AND LARGE RESERVOIRS, OBSERVATIONS WERE MADE ON A COLORADO TYPE LAND TANK, A U.S.G.S. FLOATING TANK, A U. S. WEATHER BUREAU STANDARD CLASS A LAND PAN, AND THE STORAGE RESERVOIR AT THE HYDRAULIC LABORATORY. THIS RESERVOIR IS 84.8 FEET IN DIAMETER, AND BEFORE STARTING THE OBSERVATIONS IT WAS LINED WITH COPPER TO ELIMINATE ALL POSSIBILITY OF LEAKAGE. THE RESULTS ARE ALSO SHOWN IN THE ABOVE TABLE. THESE OBSERVATIONS ARE FOR A SHORT PERIOD ONLY, AND BEFORE DEFINITE CONCLUSIONS CAN BE DRAWN MORE COMPLETE OBSERVATIONS MUST BE MADE.

R. A. NORTON HAS SENT IN SOME INTERESTING DATA IN REGARD TO THE VALUE OF N IN KUTTER'S FORMULA FOR THE MAIN CHANNEL OF THE LAKE FORK SPECIAL DRAINAGE DISTRICT AND LATERAL No. 15 OF THAT DISTRICT. MEASUREMENTS WERE MADE ON THE MAIN CHANNEL OVER A SLOPE COURSE 816 FEET LONG. DURING 1924 THE CHANNEL WAS LINED WITH BUSHY WILLOWS WHICH FILLED ABOUT TWO-THIRDS OF THE CHANNEL. THESE WERE CLEARED OUT IN 1925 BUT BY AUTUMN OF 1926 THE CHANNEL HAD AGAIN DETERIORATED TO ABOUT THE CONDITION NOTED IN 1924.

THE VALUE OF N VARIED FROM 0.0303 WHEN THE CHANNEL WAS CLEAR TO AS HIGH AS 0.1060 WHEN IT WAS CHOKED WITH VEGETATION. A STUDY OF THE RATING CURVES FOR THIS CHANNEL REVEALS THAT AS MUCH WATER COULD BE CARRIED OFF BY A 7-FOOT STAGE WITH A CLEARED CHANNEL AS BY AN 11 FOOT STAGE UNDER SUMMER CONDITIONS WITH THE CHANNEL UNCLEARED.

MEASUREMENTS WERE MADE ON LATERAL No. 15 OVER A STRAIGHT COURSE 1,000 FEET LONG. A CONTINUOUSLY INCREASING GROWTH OF CATTAILS WAS FOUND IN THIS CHANNEL DURING THE PERIOD COVERED BY THE MEASUREMENTS AND IN 1926 SOME BUSHY WILLOWS MADE THEIR APPEARANCE. THE VALUE OF N IN THIS CHANNEL VARIED FROM 0.0278 IN THE EARLY SPRING OF 1925 TO 0.1425 IN JUNE, 1926.

A NEW PROJECT ENTITLED "MECHANICAL CONTROL OF THE EUROPEAN CORN BORER" HAS BEEN INSTITUTED IN COOPERATION WITH THE BUREAU OF AGRICULTURAL ECONOMICS AND CERTAIN MANUFACTURERS OF FARMING IMPLEMENTS. THE WORK UNDER THIS PROJECT WILL HAVE FOR ITS PURPOSE THE ATTAINING OF THE MOST EFFECTIVE CONTROL POSSIBLE WITH AVAILABLE MACHINERY, AND THE DEVELOPING OF NEW MACHINERY THAT WILL EFFECTIVELY CONTROL THE BORER. R. B. GRAY WILL BE IN ACTIVE FIELD CHARGE OF THIS PROJECT.

H. B. WALKER, WHO IS THIS YEAR DIRECTING THE FARM EQUIPMENT RESEARCH PROJECT, WAS IN WASHINGTON SEVERAL DAYS IN THE INTEREST OF THAT PROJECT. PROFESSOR WALKER HAS SPENT A LARGE PART OF THE LAST THREE MONTHS AT THE VARIOUS STATE COLLEGES IN THE EASTERN HALF OF THE UNITED STATES. AFTER THE A.S.A.E. MEETING AT ST. PAUL HE WILL MAKE AN EXTENDED TRIP AMONG THE WESTERN COLLEGES.

FRED C. SCOBEEY AND PAUL A. EWING MADE A TRIP TO ARIZONA LATE IN THE MONTH, THE FORMER TO LOCATE SUCH FLUMES AS MIGHT HAVE FEATURES WORTHY OF DESCRIPTION IN THE BULLETIN ON FLOW OF WATER THROUGH STRUCTURES OF THAT TYPE, ON WHICH HE IS NOW WORKING. MR. EWING CONFERRED WITH PROFESSOR G.E.P. SMITH AND OTHER MEMBERS OF THE COMMITTEE FORMED SOME WEEKS AGO TO PASS UPON THE ECONOMIC FEASIBILITY OF THE IRRIGATION DISTRICT RECENTLY FORMED IN SAN PEDRO VALLEY, AND LATER VISITED OFFICIALS OF THE DISTRICT AND COUNTY OFFICES AT TOMBSTONE TO SECURE DATA NEEDED IN THE COMMITTEE'S REPORT. COMPLETION OF THE LATTER STILL AWAITS ESTIMATES OF THE DISTRICT'S ENGINEERS, WHICH ARE PROMISED FOR EARLY SUBMITTAL.

IN ORDER TO DETERMINE THE RELATION BETWEEN THE FLUORINATION OF THE
TANKS AND LATER INVESTIGATIONS, OBSERVATIONS WERE MADE ON A FLUORINE TYPE TANK
TANK, A U.S.G. FLUORINE TANK, A U.S. WATERS SUPPLY SYSTEM CLASS A TANK
AND THE STORAGE RESERVOIR AT THE WATERS SUPPLY SYSTEM. THIS RESERVOIR
IS 24.8 FEET IN DIAMETER, AND BEFORE STARTING THE OBSERVATIONS IT WAS FILLED
WITH COPPER TO ELIMINATE ALL POSSIBILITY OF LEAKAGE. THE RESULTS ARE ALSO
SHOWN IN THE ABOVE TABLE. THESE OBSERVATIONS ARE FOR A SHORT PERIOD ONLY,
AND BEFORE ANY CONCLUSIONS CAN BE DRAWN MORE COMPLETE OBSERVATIONS MUST
BE MADE.

H. A. HORTON HAS SENT IN SOME INTERESTING DATA IN REGARD TO THE VALUE
OF μ IN FUTURE TRENDS FOR THE MAIN CHANNEL OF THE LAKE FOR BENTON
DRAINAGE DISTRICT AND LAKEVIEW NO. 10 OF THAT DISTRICT. MEASUREMENTS WERE
MADE ON THE MAIN CHANNEL OVER A 1000 FOOT STAGE DURING 1923 AND
CHANNEL WAS FILLED WITH RUBBY SILT WHICH FILLED ABOUT TWO-THIRDS OF THE
CHANNEL. THESE WERE CLEANED OUT IN 1925 BUT BY AUTUMN OF 1925 THE CHANNEL
WAS AGAIN ACCUMULATED TO ABOUT THE CONDITION NOTED IN 1923.

THE VALUE OF μ VARIED FROM 0.0005 WHEN THE CHANNEL WAS FILLED TO AS
HIGH AS 0.0010 WHEN IT WAS FILLED WITH VEGETATION. A STUDY OF THE RATING
CURVES FOR THIS CHANNEL REVEALS THAT AN INCH WATER COULD BE CARRIED BY A
7-FOOT STAGE WITH A CLEANED CHANNEL AS BY AN 11 FOOT STAGE UNDER
CONDITION WITH THE CHANNEL UNCLEANED.

MEASUREMENTS WERE MADE ON LATERAL NO. 12 OVER A STATIONARY COURSE
1,000 FEET LONG. A CONTINUOUSLY INCREASING GROWTH OF CATTAILS WAS FOUND IN
THIS CHANNEL DURING THE PERIOD COVERED BY THE MEASUREMENTS AND IN 1923 SOME
RUBBY SILT WAS THEIR APPEARANCE. THE VALUE OF μ IN THIS CHANNEL VARIED
FROM 0.0015 IN THE EARLY PART OF 1923 TO 0.0025 IN JUNE, 1925.

A NEW PROJECT ENTITLED "MECHANICAL CONTROL OF THE FLOODING OF THE
BENTON" HAS BEEN INSTITUTED IN COOPERATION WITH THE BUREAU OF AGRICULTURAL
ECONOMICS AND CONTAIN MANUFACTURERS OF FARMING IMPLEMENTS. THE WORK UNDER
THIS PROJECT WILL HAVE FOR ITS PURPOSE THE ATTAINING OF THE MOST EFFICIENT
CONTROL POSSIBLE WITH AVAILABLE MACHINERY, AND THE DEVELOPING OF NEW
MACHINERY THAT WILL EFFICIENTLY CONTROL THE BENTON. H. A. GAY WILL BE IN
ACTIVE FIELD CHARGE OF THIS PROJECT.

H. E. WALKER, WHO IS THIS YEAR DIRECTING THE FARM EQUIPMENT RESEARCH
PROJECT, WAS IN WASHINGTON SEVERAL DAYS IN THE INTEREST OF THAT PROJECT.
PROFESSOR WALKER HAS SPENT A LARGE PART OF THE LAST THREE MONTHS AT THE
VARIETY STATE COLLEGE IN THE EASTERN PART OF THE UNITED STATES. AFTER THE
A.S.A.E. MEETING AT ST. PAUL HE WILL MAKE AN EXTENDED TRIP ACROSS THE
WESTERN COUNTRY.

PAUL D. GIBSON AND PAUL A. LEWIS MADE A TRIP TO ARIZONA LATE IN THE
MONTH, THE PURPOSE TO LOCATE SUCH PLACES AS MIGHT HAVE FEATURES WORTHY OF
DESCRIPTION IN THE BULLETIN ON FLOW OF WATER THROUGH STRUCTURES OF THAT
TYPE, OF WHICH HE IS NOW WORKING. MR. LEWIS CONFERRED WITH PROFESSOR
G. E. SMITH AND OTHER MEMBERS OF THE COMMITTEE FORMED SOME WEEKS AGO TO
PASS UPON THE ECONOMIC FEASIBILITY OF THE IRRIGATION DISTRICT RECENTLY
FORMED IN SAN PEDRO VALLEY, AND LATER VISITED OFFICIALS OF THE DISTRICT AND
COUNTY OFFICERS AT TOMBSTONE TO SECURE DATA NEEDED IN THE COMMITTEE'S REPORT.
COMPARISON OF THE LATTER FIELD DATA WITH ESTIMATES OF THE DISTRICT'S CAPACITY,
WHICH WAS PREPARED FOR EARLY SUBMITTAL.

A. L. FELLOWS RETURNED TO HIS HEADQUARTERS IN DENVER, COLO., DURING THE LATTER PART OF MAY AFTER A FIELD TRIP OVER THE SOUTHWESTERN TERRITORY WHICH INCLUDED THE LEVEE WORK OF THE IMPERIAL VALLEY. MR. FELLOWS SPENT ABOUT TWO WEEKS IN THE BERKELEY OFFICE.

WELLS A. HUTCHINS STARTED ON A FIELD TRIP DURING MAY WHICH WILL TAKE HIM THROUGH MOST OF THE STATES COVERED IN THE TERRITORY OF THE BERKELEY OFFICE. HE IS GATHERING DATA FOR A MANUSCRIPT ON THE METHODS OF REFINANCING IRRIGATION PROJECTS.

L.T. JESSUP IS ON LEAVE WITHOUT PAY AND LOANED TO THE STATE OF IDAHO FOR A PERIOD OF ABOUT TWO MONTHS, DURING WHICH TIME HE IS MAKING A STUDY OF THE KOOTENAI VALLEY DIKING AND DRAINAGE PROJECTS IN NORTHERN IDAHO.

THE BERKELEY OFFICE HAS RECEIVED THE FOLLOWING PROGRESS REPORTS:
"DUTY OF WATER IN SAN DIEGO COUNTY, CALIF.," BY COLIN A. TAYLOR.
"DUTY OF WATER IN SAN FERNANDO VALLEY, CALIF.," BY HARRY F. BLANEY.
"DEVELOPMENT OF GROUND WATER IN NEVADA." BY W. L. STOCKWELL.
"THE VENTURI FLUME," BY R. L. PARSHALL. "EVAPORATION FROM FREE WATER SURFACES," BY CARL ROHWER. "CONTROL OF SILT IN STREAMS AND RESERVOIRS OF TEXAS," BY R. G. HEMPHILL, AND "RECLAMATION OF ALKALI LAND," BY JAMES C. MARR.

A. H. SENNER HAS BEEN REQUESTED TO SERVE ON A COMMITTEE OF THE AMERICAN OIL BURNER ASSOCIATION ORGANIZED FOR THE PURPOSE OF PREPARING AND DIRECTING A RESEARCH PROGRAM ALONG THE LINES BEGUN BY THIS DIVISION, IN DOMESTIC OIL BURNERS. THE OTHER MEMBERS OF THE COMMITTEE ARE DEAN PAUL ANDERSON OF KENTUCKY AND JAMES L. BREESE, PRESIDENT OF THE BREESE ENGINEERING CORPORATION OF CHICAGO. THE COMMITTEE EXPECTS TO CONDUCT WORK THIS SUMMER AT JOHNS HOPKINS UNIVERSITY. PROFESSOR THEODORE THEODORSEN, FORMER RESEARCH FELLOW OF THE UNIVERSITY OF NORWAY WILL CONDUCT THE INVESTIGATION.

G. M. WARREN HAS COMPLETED THE MANUSCRIPT FOR A FARMERS BULLETIN ON "MAKING CELLARS DRY." THIS IS INTENDED TO SUPERSEDE THE YEARBOOK SEPARATE ON "SECURING A DRY CELLAR."

J.T. BOWEN MADE A TRIP TO NEW YORK EARLY IN JUNE IN CONNECTION WITH THE DESIGN OF EQUIPMENT FOR USE IN THE CORN BORER CONTROL WORK. MR. BOWEN RECENTLY COMPLETED THE PLANS FOR A WATER SUPPLY SYSTEM FOR THE RANGE LIVESTOCK EXPERIMENT STATION OF THE BUREAU OF ANIMAL INDUSTRY AT MILES CITY, (FT. KEOGH), MONT. WATER IS PUMPED FROM THE RIVER INTO A 100,000 GALLON SETTLING TANK BY TWO 300 G.P.M. CENTRIFUGAL PUMPS. FROM THE SETTLING TANK THE WATER IS DRAWN THROUGH TWO SAND FILTERS BY TWO TRIPLEX PUMPS CONNECTED IN PARALLEL, AND ELEVATED INTO A 75,000 GAL. STEEL TANK 125 FT. HIGH. ONLY ONE OF THE TRIPLEX PUMPS, HOWEVER, IS TO BE OPERATED AT A TIME, THE OTHER BEING HELD AS A STAND-BY IN CASE OF BREAKDOWN. THE TOTAL HEAD ON THE TRIPLEX PUMPS IS ABOUT 450 FT. ALL PUMPS ARE DRIVEN BY DOUBLE SQUIRREL CAGE MOTORS WITH VOLTAGE REDUCTION STARTERS. G.M. WARREN ASSISTED IN THE SELECTION OF THE FILTERS.

F. O. BARTEL VISITED WASHINGTON JUNE 15 AND 16 FOR A CONFERENCE WITH MR. MCORORY ON THE CONDUCT OF HIS SOIL EROSION WORK IN NORTH CAROLINA.

C. A. BENNETT, AT TALLULAH, LOUISIANA, REPORTS THAT THE MISSISSIPPI OVERFLOW HAS SUBSIDED TO SUCH AN EXTENT AS TO UNCOVER TALLULAH, ALTHOUGH WATER STILL REMAINS ON LOW-LYING LAND, INTERFERING CONSIDERABLY WITH FARM WORK AND WITH THE EFFECTIVE PROSECUTION OF HIS INVESTIGATIONS. A SECOND RISE IN THE MISSISSIPPI IS LIKELY TO CAUSE MORE OR LESS SERIOUS FLOOD CONDITIONS IN THE OVERFLOWED TERRITORY FOR SOME TIME, ALTHOUGH WATER WILL NOT RISE AS HIGH AS IN THE FIRST OVERFLOW.

D. L. YARNELL REPORTS SERIOUS INTERFERENCE WITH HIS WORK AT IOWA CITY, DUE TO HIGH STAGES OF THE IOWA RIVER DURING THE LAST FEW WEEKS. MR. YARNELL IS CONDUCTING THE INVESTIGATION OF FLOW AROUND BRIDGE PIERS AND BENDS.

O. A. BENNETT, AT TALLAHASSEE, FLORIDA, REPORTS THAT THE MISSISSIPPI
OVERFLOW HAS SUBSIDED TO SUCH AN EXTENT AS TO UNCOVER TALLAHASSEE, ALTHOUGH
WATER STILL REMAINS ON LOW-LYING LAND, INTERFERING CONSIDERABLY WITH FARM
WORK AND WITH THE EFFECTIVE PROSECUTION OF HIS INVESTIGATION. A SECOND
RISE IN THE MISSISSIPPI IS LIKELY TO CAUSE MORE OR LESS SERIOUS FLOODING
SITINGS IN THE OVERFLOWED TERRITORY FOR SOME TIME, ALTHOUGH WATER WILL NOT
RISE AS HIGH AS IN THE FIRST OVERFLOW.

O. J. YARNALL REPORTS SERIOUS INTERFERENCE WITH HIS WORK AT JONES
DUE TO HIGH STAGES OF THE JONES RIVER DURING THE LAST TWO WEEKS.
MR. YARNALL IS CONDUCTING THE INVESTIGATION OF FLOOD AREAS AND HAS
AND DEPOSED